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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/884,851	06/18/2001	David A. Coppeta	34013-39USPT	2471

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EXAMINER	
PAYNE, DAVID C	

ART UNIT	PAPER NUMBER
2633	

DATE MAILED: 06/30/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	09/884,851	COPPETA ET AL.	
	Examiner	Art Unit	
	David C. Payne	2633	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *18 June 2001*.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-28* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-14,16-24 and 26-28* is/are rejected.

7)☒ Claim(s) *15 and 25* is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☒ The drawing(s) filed on *18 June 2001* is/are: a)☒ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date *1/23/02 & 4/26/02*.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____.
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: _____.

DETAILED ACTION

Claim Rejections - 35 USC § 103

1. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

2. Claims 1-14, 16-24 and 26-28 are rejected under 35 U.S.C. 103(a) as being unpatentable over Baney et al. US 6,486,984 B1 (Baney) in view of Kingsley et al. US 5,340,988 (Kingsley).

Re claims 1, 7, 9 Baney disclosed

A monitoring device/method operating on a fiber optic network, the monitoring device comprising: an input port (50 of Figure 2) for receiving a wavelength division multiplexed optical signal including a plurality of optical signals centered at different wavelengths within a range of wavelengths (e.g., Baney col./line: 4/40-47); a dispersion device (24 of Figure 2) disposed to disperse the wavelength division multiplexed optical signal into a discrete power spectrum; a pixelated optical detector (34 of Figure 2).

Baney does not disclose,

the detector having a point spread function and optically coupled to receive and convert the discrete power spectrum into electrical signals; and at least one computing device receiving digital data representative of the electrical signals, performing a deconvolution operation on the digital data to compensate for the point spread function of the pixelated detector, and generating compensated output data representative of the optical signals.

Kingsley disclosed,

a pixelated detector (120 of Figure 1) having a point spread function (e.g., col./line: 8/65-67) and optically coupled to receive and convert the discrete power spectrum into electrical signals (e.g., col./line: 6/45-50); and at least one computing device (190 of Figure 1) receiving digital data representative of the electrical signals (e.g., col./line: 6/54-60), performing a deconvolution operation (e.g., col./line: 9/49-55) on the digital data to compensate for the point spread function of the pixelated detector, and generating compensated output data representative of the optical signals.

It would have been obvious to one ordinary skill in the art at the time of invention to use the pixelated detector and processing function of Kingsley in the Baney monitor to achieve a high resolution radiation imaging system having a non-aliased spatial frequency response at frequencies greater than the imaging system's Nyquist frequency (see Kingsley e.g., col./line: 2/7-12).

Re claim 21, the modified invention as previously discussed does not disclose a calibration feature. However, it would have been obvious to one ordinary skill in the art at the time of invention to calibrate the monitor so as to properly set the apparatus to a set of known boundaries before attempting measurement. Calibration is an extremely well known step in using test equipment.

Re claims 24 and 26, the modified invention as previously discussed disclosed a computer-readable medium (see Kingsley 175 if Figure 1) having stored data and instructions and

filters (see Kingsley 180 if Figure 1). The modified invention does not disclose a calibration feature. However, it would have been obvious to one ordinary skill in the art at the time of invention to calibrate the monitor over a number of variables so as to properly set the apparatus to a set of known boundaries before attempting measurement. Calibration is an extremely well known step in using test equipment.

Re claims 2 and 10, the modified invention disclosed

wherein said at least one computing device further transforms the digital data to the frequency domain (see Kingsley e.g., col./line: 9/5-15).

Re claims 3, 11 and 18, the modified invention disclosed

wherein the transformation includes performing a fast Fourier transform (FFT) (see Kingsley e.g., col./line: 9/15-20).

Re claims 4 and 16, the modified invention disclosed

at least one computing device utilizes a filter representative of the point spread function of said pixelated optical detector (see Kingsley, 180 of Figure 1, e.g., col./line: 8/65-67).

Re claims 5, 12, 14 and 28, the modified invention disclosed

wherein the filter is utilized during the deconvolution operation (see Kingsley, 180 of Figure 1).

Re claims 13, 23 and 27, the modified invention does not disclose

wherein the known calibration optical signal has a substantially Gaussian beam profile. However, it would have been obvious to one ordinary skill in the art at the time of invention to use a Gaussian calibration signal in order to produce a normal distribution of the signal light.

Re claims 6 and 17, the modified invention disclosed

wherein said at least one computing device (see Kingsley, 190 of Figure 1) further transforms the compensated output domain to the spatial domain.

Re claim 22, the modified invention disclosed storing the filter (see Kingsley, e.g., col./line: 6/55-60).

Re claim 19, the modified invention disclosed

displaying the compensated output data representative of the discrete power spectrum (see Kingsley, 190 of Figure 1).

Re claims 8 and 20, the modified invention disclosed

wherein the wavelength-range of the wavelength divisional multiple optical signal includes at least one of the following: the optical L-band, the optical C-band, and the optical S-band. However, it would have been obvious to one ordinary skill in the art at the time of invention

to operate the monitor over these wavelengths since these are the predominant commercial wavelength bands used in optical communication. These frequencies bands are extremely well known in the art.

Allowable Subject Matter

3. Claims 15 and 25 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

Conclusion

4. Any inquiry concerning this communication or earlier communications from the examiner should be directed to David C. Payne whose telephone number is (703) 306-0004. The examiner can normally be reached on M-F, 7a-4p.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Jason Chan can be reached on (703) 305-4729. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Leslie Pascal

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